



# St. Johns River Water Management District

Ann B. Shortelle, Ph.D., Executive Director

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4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500  
On the internet at [www.sjrwmd.com](http://www.sjrwmd.com).

DATE: September 14, 2018  
TO: Interested Firms  
FROM: Alan Weaver, CPPO, Sr. Procurement Specialist  
SUBJECT: Two-Step Invitation for Bid 33537, Addendum 3  
Lake Apopka Innovative Total Phosphorus Removal

**This addendum involves changes to the subject Two-Step Invitation for Bid — please read carefully:**

1. The time and date for the submittal of bids remains **1:00 p.m., October 4, 2018.**
2. A revised list of attendees of the non-mandatory pre-bid conference is attached.
3. Page 13, the form, “Cost Schedule,” shall be deleted in its entirety and replaced with the attached, “Revised Cost Schedule.”
4. The Evaluation Committee will meet at 11:00 a.m. on both September 26 and 27, 2018, to respond to any questions submitted by Respondents.
5. Page 6, paragraph “8. **MINIMUM QUALIFICATIONS**,” is herewith deleted in its entirety and replaced with the following:

**“8. MINIMUM QUALIFICATIONS**

Respondent must submit Respondent-provided documentation, as well as, use the “Qualification” forms (General, Similar Projects, and Client References) provided in these documents, to document the minimum qualifications listed below. Failure to include the required Respondent-provided information and these forms with the Bid may result in disqualification of the Respondent and return of its bid unopened.

- a. Respondent (or a combination of the firm, individual, or project manager assigned to the work) must have successfully completed, or have been successfully operating, at least one project or pilot study of a similar nature (removal of phosphorus from the water column) within the five years immediately preceding the date for receipt of Bids.  
*(Use District form to document the project)*
- b. Respondent must have no less than one year of experience on the project specified above.  
*(Respondent-prepared documentation – no District form provided)*
- c. A description of the TP removal process from a chemical and physical standpoint that defines how the proposed process removes the TP from the water column. The target effluent concentration from the process must also be included. Respondent must also provide a list of compounds added to the effluent stream by the removal process, including reaction byproducts and additives, and typical effluent concentrations for each compound.

NOTE: Total Phosphorus removal processes that result in a concentration target of greater than 0.055 mg/l will be disqualified. Also, if the documents are not clear, are missing information, or do not adequately describe the process in order for the Committee to determine whether the process meets the minimum requirements as expressed above, the Respondent will be disqualified.

*(Respondent-prepared documentation – no District form provided)*

- d. Representative water quality monitoring data collected during previous treatment operations within the past five years. This data must include the analytes TP, TSS, PO4-D, pH, DO, conductivity, and temperature for both the influent and effluent stream including the date and time the samples were collected. Inflow and outflow TP concentrations, as analyzed by a certified lab for at least two sampling events during at least one previous project, shall be included, as well as, copies of the lab’s certification(s) and certified reports.

*(Respondent-prepared documentation – no District form provided)*

- e. Details of the specific means by which the phosphorus-containing by-product and any other byproducts will be disposed. Disposal may be accomplished through export out of the Lake Apopka watershed or within the watershed if biologically immobilized by a process, as verified by an independent monitoring agency. Rough estimates of by-product production, the proposed facility size, and a plan for handling the by-products are required.

*(Respondent-prepared documentation – no District form provided)*

- f. Details of land requirements for TP removal process.

*(Respondent-prepared documentation – no District form provided)*

- g. Respondent shall request that Dun & Bradstreet (D&B) provide the District with a Comprehensive Report on Respondent to assist the Committee in determining financial capability. Respondent is responsible to pay the cost of the report and have D&B to submit the report directly to the District by no later than the time and date set for receipt of bids.

*(Respondent-prepared documentation – no District form provided)*

- h. Respondent must provide at least one client reference and may be from the similar project listed in response to subparagraph (a), above.

*(Use District form to document the references)*

Irrespective of the minimum qualifications stated above, the District may make such investigations as it deems necessary to determine the ability of the Respondent to perform the Work. The District reserves the right to reject any Bid if the evidence submitted by such Respondent and/or the District’s independent investigation of such Respondent fails to satisfy the District that such Respondent is properly qualified to carry out the obligations of the Agreement and complete the Work in a manner acceptable to the District within the time period specified.”

8. Delete the form, “Payment Bond” in its entirety, which was added under Addendum 1 and replace it with Pages 23 and 23a, “Performance Bond and Payment Bond” forms, respectively.
9. Page 25, paragraph “1. **TERM,**” subparagraph “(d)” shall be deleted in its entirety and replaced with revised subparagraph “(d)” as follows:

“(d) This Agreement may be renewed for three additional 12-month terms by the mutual and written consent of each party.”

10. Page 32, under Additional Provisions, the paragraph, “**PERFORMANCE AND PAYMENT BOND,**” was deleted under Addendum 1 and replaced with “**PAYMENT BOND.**” The “**PAYMENT BOND**” paragraph added under Addendum 1 shall be deleted in its entirety and replaced with the following two paragraphs:

“**PAYMENT BOND:** The payment security furnished by Contractor and surety in the form provided by the District as guarantee that Contractor will pay in full all bills and accounts for material, labor, services, and supplies used directly or indirectly in the performing the Work.

**PERFORMANCE BOND:** The performance security furnished by Contractor and surety in the form provided by the District as guarantee that Contractor will complete the demobilization and site restoration work required in the statement of work and in accordance with the terms of the Agreement.”

11. Page 34, paragraph “18. **BONDS,**” as revised under Addendum 1, is herewith deleted in its entirety and replaced with the following:

“18. **BONDS**

- (a) **Payment Bond.** A payment bond in the amount of \$250,000 is required.
- (b) **Performance Bond.** A performance bond in the amount of \$250,000 is required. The Performance Bond is given as a guarantee that Contractor will complete, to the satisfaction of the District, the demobilization and site restoration work required in the statement of work.
- (c) **Recording.** Bonds shall be recorded in the public records of the county where the Work is located. A certified copy of completed and recorded bonds must be delivered to and accepted by the District prior to commencement of the Work. Bond premiums shall be paid by Contractor. Bonds shall be on the form provided in the Proposal Documents and written through a licensed agency that fulfills the requirements of §287.0935, Fla. Stat.
- (d) **Qualification-Management and Strength.** The Surety executing a bond must be rated no less than “Excellent” for both financial strength and issuer credit, with a rating outlook of stable or positive for both and must have a financial size rating of VII or better according to the latest information available from A.M. Best Company, Inc.’s, rating and analysis web site.
- (e) In lieu of the bond, Contractor may submit an alternative form of security in the form of cash, money order, certified check, cashier’s check, clean irrevocable letter of credit, or other security acceptable to the District.”

12. Delete pages 43 – 49, “Exhibit A — Statement of Work” in its entirety and replace it with the attached pages 43 – 50, “Exhibit A — Revised Statement of Work.”

**NOTE:** Please acknowledge receipt of this Addendum in your submittal.

If you have any questions regarding this addendum, contact Alan Weaver at (386) 329-4271 or via email at [aweaver@sjrwmd.com](mailto:aweaver@sjrwmd.com).

PAYMENT BOND

Bond Number \_\_\_\_\_  
Surety Number \_\_\_\_\_

St Johns River Water Management District Contract Number 33537

BY THIS BOND, we, \_\_\_\_\_, whose address is \_\_\_\_\_, Phone \_\_\_\_\_, (“Principal”), and \_\_\_\_\_, whose address is \_\_\_\_\_, Phone \_\_\_\_\_, a corporation organized under the laws of the state of \_\_\_\_\_ and licensed to do business in the state of Florida (“Surety”), bind ourselves and our heirs, personal representatives, successors, and assigns, jointly and severally, unto the St. Johns River Water Management District (the “District”), whose address is 4049 Reid Street, Palatka, Florida 32177-2571, Phone (386) 329-4500, for the use and benefit of claimants, as defined in §255.05(1), Fla. Stat., in the amount of \$250,000, for the payment of which sum will and truly be made.

THE CONDITION OF THIS BOND is that if Principal:

1. Promptly makes payment to all claimants supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the Work described in the contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in §255.05(2) and (10), Fla. Stat.

Any changes in or under the contract documents (which include the plans and specifications) and compliance or noncompliance with any formalities connected with the contract documents or the changes do not affect Surety’s obligation under this bond, and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this bond shall increase or decrease in accordance with approved changes or other modifications to the contract documents.

IN WITNESS WHEREOF, Principal and Surety have executed this instrument under their several seals on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed and this Bond fully signed by each party’s undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered in the presence of:

Principal By: \_\_\_\_\_  
\_\_\_\_\_  
(Official title) (Typed name) (SEAL)

Surety By: \_\_\_\_\_  
\_\_\_\_\_  
(Official title) (Typed name) (SEAL)

(Countersignature by Florida Registered Agent)

NOTE: If Principal and Surety are corporations, the respective corporate seals should be affixed and attached. Attach a certified copy of power of attorney appointing individual attorney-in-fact for execution of Payment Bond on behalf of Surety.

PERFORMANCE BOND

Bond Number \_\_\_\_\_  
Surety Number \_\_\_\_\_

St Johns River Water Management District Contract Number 33537

BY THIS BOND, we, \_\_\_\_\_, whose address is \_\_\_\_\_, Phone \_\_\_\_\_, ("Principal"), and \_\_\_\_\_, whose address is \_\_\_\_\_, Phone \_\_\_\_\_, a corporation organized under the laws of the state of \_\_\_\_\_ and licensed to do business in the state of Florida ("Surety"), bind ourselves and our heirs, personal representatives, successors, and assigns, jointly and severally, unto the St. Johns River Water Management District (the "District"), whose address is 4049 Reid Street, Palatka, Florida 32177-2571, Phone (386) 329-4500, for the use and benefit of claimants, as defined in §255.05(1), Fla. Stat., in the amount of \$250,000 for the payment of which sum will and truly be made.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the work described in these contract documents, which are incorporated into this bond by reference, at the times and in the manner prescribed in the contract; and
2. Pays the District all losses and damages, expenses, costs, and attorney's fees, including appellate proceedings, that the District sustains because of a default by Principal under the contract; and
3. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in §255.05(2) and (10), Fla. Stat.

Any changes in or under the contract documents (which include the plans and specifications) and compliance or noncompliance with any formalities connected with the contract documents or the changes do not affect Surety's obligation under this bond, and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this bond shall increase or decrease in accordance with approved changes or other modifications to the contract documents.

IN WITNESS WHEREOF, Principal and Surety have executed this instrument under their several seals on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed and this Bond fully signed by each party's undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered in the presence of:

Principal By: \_\_\_\_\_

\_\_\_\_\_  
(Official title) (Typed name) (SEAL)

Surety By: \_\_\_\_\_

\_\_\_\_\_  
(Official title) (Typed name) (SEAL)

(Countersignature by Florida Registered Agent)

NOTE: If Principal and Surety are corporations, the respective corporate seals should be affixed and attached. Attach a certified copy of power of attorney appointing individual attorney-in-fact for execution of Payment Bond on behalf of Surety.

REVISED COST SCHEDULE

Include this form in the Bid Envelope

Bid to be opened at 1:00 p.m., October 4, 21018

To: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

In accordance with the advertisement requesting bids for the Lake Apopka Innovative Total Phosphorus Removal, subject to the terms and conditions of the Agreement, the undersigned proposes to perform the Work for the price contained in the following schedule (fill in all blanks).

If said bid exceeds the estimated amount previously provided, the District expressly reserves the right to increase, decrease, or delete any class, item, or part of the Work, as may be determined by the District.

Respondents are reminded to refer to "PREPARATION AND ORGANIZATION OF BID DOCUMENTS" for information to be included with the bid package.

Unit Bid Cost per pound of Removed Phosphorus..... \$ \_\_\_\_\_ / pound

The bid will be awarded to the lowest responsive and responsible Respondent for the lowest per-pound Unit Bid Cost.

Pursuant to §287.084(2) Fla. Stat., a vendor whose principal place of business is outside the State of Florida must accompany any written bid, proposal, or reply documents with a written opinion of an attorney at law licensed to practice law in that foreign state, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that foreign state in the letting of any or all public contracts.

I HEREBY ACKNOWLEDGE, as Respondent's authorized representative, that I have fully read and understand all terms and conditions as set forth in this bid and upon award of such bid, shall fully comply with such terms and conditions.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Respondent (firm name)

\_\_\_\_\_  
Address

\_\_\_\_\_  
E-mail address

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Telephone number

\_\_\_\_\_  
Typed name and title

\_\_\_\_\_  
Fax number

ATTACHMENT A — REVISED STATEMENT OF WORK

**I. BACKGROUND**

Lake Apopka, the headwaters of the Ocklawaha Chain of Lakes, is the fourth largest lake in Florida (approximately 31,000 acres). The lake is located approximately 15 miles northwest of Orlando. The lake lies mostly within Orange County; the western part of the lake lies in Lake County. Persistent eutrophic conditions sustained algal blooms in the lake for decades (1940s-1990s), resulting in the total loss of submerged aquatic vegetation (SAV), decline in sportfish populations, and accumulation of a 0 to 60 cm thick layer of unconsolidated flocculent organic sediment within the lake. The District has maintained a restoration program to reverse eutrophication in the lake by limiting watershed inputs of the limiting nutrient, phosphorus (P), and removing accumulated P and flocculent sediments from the lake. Documented recovery of SAV and improvements in water quality have shown that the strategy has been successful. However, full recovery of the lake has yet to be achieved due to the large reservoir of P stored in the flocculent sediments that continues to support eutrophic conditions. Sediments are easily re-suspended and a fraction may remain in the water column for weeks to months, providing additional phosphorus release and impeding light availability for SAV. Therefore, the District is seeking technologies that can supplement the current restoration timeline by directly removing P (primarily particulate, including algae) from the lake's water.

A location map, Figure 1, is provided on the next page.

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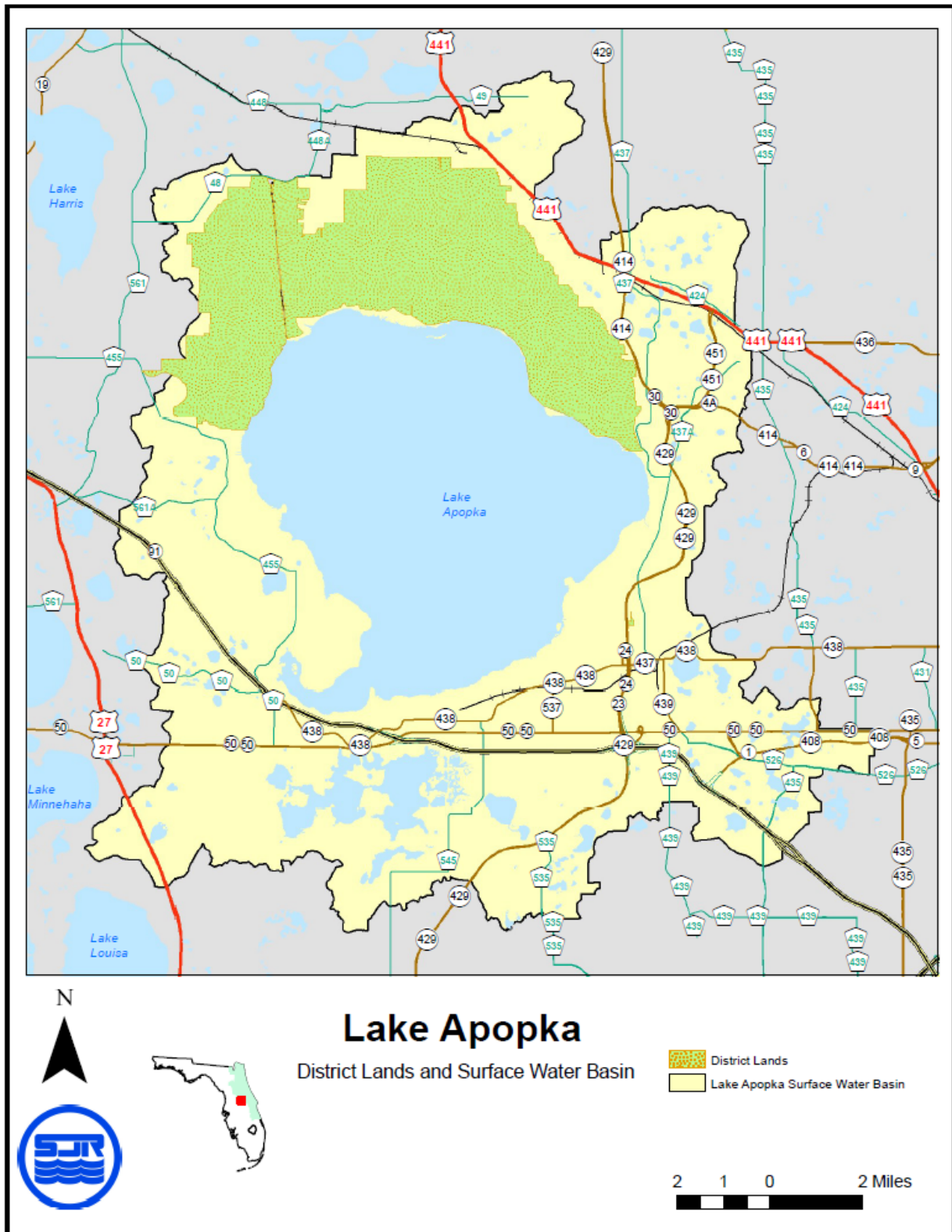


Figure 1: Location Map

## II. OBJECTIVE

The objective of the project is to utilize an innovative, non-traditional treatment technology that is sustainable, reliable and cost-effective and will remove Total Phosphorus (TP) from Lake Apopka's water column with a contract period of two years.



### III. SCOPE

The District will pay Contractor the accepted bid rate for each pound of TP removed from the water column. Contractor shall provide the design, materials, labor, testing, and disposal of by-product necessary for the process.

Contractor shall operate a treatment process to remove TP from the Lake Apopka water column. Contractor will be responsible to permit, design, construct, operate, and monitor the project to consistently and cost-effectively remove TP.

#### **Treatment Process Description:**

Respondent shall provide a project description with both narrative and graphics that describes the chemical and/or physical principles that the treatment technology uses for removal of phosphorus, its phosphorus removal efficiency, and a brief summary of results from previous projects including operating constraints. This description will specifically outline the fate of particulate phosphorus, dissolved organic phosphorus, and orthophosphate during the treatment process.

**NOTE: Removal of sediment phosphorus will not be reimbursed, unless the phosphorus is naturally resuspended into the water column (see Influent/ Effluent Placement and Sampling).**

Estimates of TP and TSS concentrations for Lake Apopka are shown in Table 1. These are provided to allow respondents to estimate TP removal efficiency but may vary during the project period. All of the District's water quality data are available via the District's Environmental Data Delivery tool at: <http://webapub.sjrwmd.com/agws10/edqt/>. The treatment process may not alter water quality such that concentrations for any parameters are outside of historical concentrations for the lake (apart from removal of target species). The primary Lake Apopka site names are CLA (center Lake Apopka), SLA (south Lake Apopka) and NLA (north Lake Apopka).

Table 1. TP and TSS Statistics for Center Lake Apopka (CLA) 2007 – 2017

<b>Water Depth</b>	<b>TP (<math>\mu\text{g L}^{-1}</math>)</b>	<b>TSS (<math>\text{mg L}^{-1}</math>)</b>	<b>Data Source</b>
Water column (0.5m)	129	86	Center Lake Apopka Station (2007 – 2017 average)
Below 0.5m and above the top of the flocculent sediments	250	500	Estimate based on 0.05% TP content by mass of Unconsolidated Sediments (Reddy et al. 1991)
Top of flocculent sediments; TSS threshold concentration for operation	500	1,000	Estimate based on 0.05% TP content by mass of Unconsolidated Sediments (Reddy et al. 1991)

#### **Influent/ Effluent Placement and Sampling:**

Contractor is responsible to establish the intake location(s). Contractor shall obtain the District's approval of the location(s) before installation.

Contractor is responsible to prepare a monitoring plan that will be submitted to the District for review, comment, and approval. Contractor is responsible for providing samples and paying for sample analysis by a certified lab approved by the District. At a minimum, Contractor is responsible for monitoring the analytes listed below in both influent and effluent water on a regular basis. If the TP treatment process introduces chemical species not listed below into the effluent, Contractor must adequately monitor all added chemical species.

Analyte	Monitoring Frequency	Method	Holding Times	Required MDL (mg/l) or precision
TSS	weekly	EPA 160.2	7 days	4.0
Turbidity (NTU)	.5 hr	N/A	In situ	± 1%
TP-D	Weekly	EPA 365.3	28 days	0.01
TP-T	Weekly	EPA 365.3	28 days	0.01
PO4-D (low level)	Weekly	EPA 365.2	48 hours	0.002
pH (field)	Weekly	EPA 150.1	In situ	± 0.2 SU
DO (field)	Weekly	EPA 170.1	In situ	± 0.2 mg/L
Conductivity (field)	Weekly	EPA 120.1	In situ	± 5%
Temperature (field)	Weekly	EPA 180.1	In situ	± 0.5°C

Contractor must monitor inflow suspended solids in real-time (30-minute intervals beginning) with a turbidity sensor for each intake location. The turbidity sensor must be capable of a linear response up to a TSS concentration of 1,000 mg/L. The first sensor reading must be taken no later than 15 minutes after pumping is initiated. The last sensor reading must be taken no earlier than 15 minutes prior to pumping ceasing for the day. Contractor must report turbidity and estimated TSS to the District daily to ensure bottom sediments are not being directly removed. The regression analysis of intake water TSS and turbidity sensor measurements must be provided to the District and updated weekly as new measurements are made. Should the turbidity vs. TSS response becomes non-linear before reaching 1,000 mg/L TSS, Contractor must consult with District staff to determine if an alternative monitoring plan is required.

If the influent turbidity exceeds an equivalent TSS concentration of 1,000 mg/L for two consecutive hourly readings, Contractor must immediately cease pumping operations for 48 hours. Prior to resuming pumping, Contractor is responsible to coordinate with the District Project Manager and confirm that lake conditions are acceptable to resuming the pumping operation(s). If a storm or other natural event causes the influent TSS concentration to exceed 1,000 mg/L, Contractor must immediately cease pumping operations until the affected area of the intake influent TSS drops below 1,000 mg/L. Whether caused by Contractor operations, storm or other natural event, Contractor must obtain an in situ suspended solids reading immediately adjacent to the intake(s) and at the bottom and top elevation of the intake(s) to confirm that the TSS concentration has dropped below 1,000 mg/L.

**NOTE: If the influent turbidity exceeds an equivalent TSS concentration of 1,000 mg/L (high concentration event), the District will calculate the maximum amount due Contractor for phosphorus removal (in pounds) using an influent TP concentration equal to the most recent TP concentration measured at the District Center Lake Station (CLA) at a point 0.5 meters below the water surface. The calculations will cover the entire day's operation and the four days immediately preceding the date of the high concentration event. If the results of the calculations are higher than the actual pounds of phosphorus removed during this five-day period, Contractor will be due the lesser amount.**

**Site Location and Power Source:**

Contractor is responsible for all the site preparation, construction, maintenance and security of the proposed process and shall include all costs (including, permitting, powering, mobilization, site preparation/construction, maintenance, security and demobilization) into the \$/pound bid price.

Upon completion of the contract, Contractor will have 90 days to remove all the infrastructure related to the process. The site shall be returned to preexisting conditions within reason. The bid must include all costs associated with the land requirements, location and construction. Prior to beginning construction, Contractor shall submit detailed plans for District review, comment, and acceptance. The detailed plans shall be signed and sealed by a licensed professional engineer through the Florida Department of Business and Professional Regulation. Potential project sites

include but are not limited to three sites on District property, as shown on Figure 2. Limited uplands may require additional fill to meet Contractor's needs for the site. Depending on the site selected, a permit may be required to construct on the site, which will be the responsibility of Contractor (i.e. Duda Pump Station and Hooper Farms Road sites). If a site is preferred that is not owned by the District, obtaining access to the land will be the responsibility of Contractor.

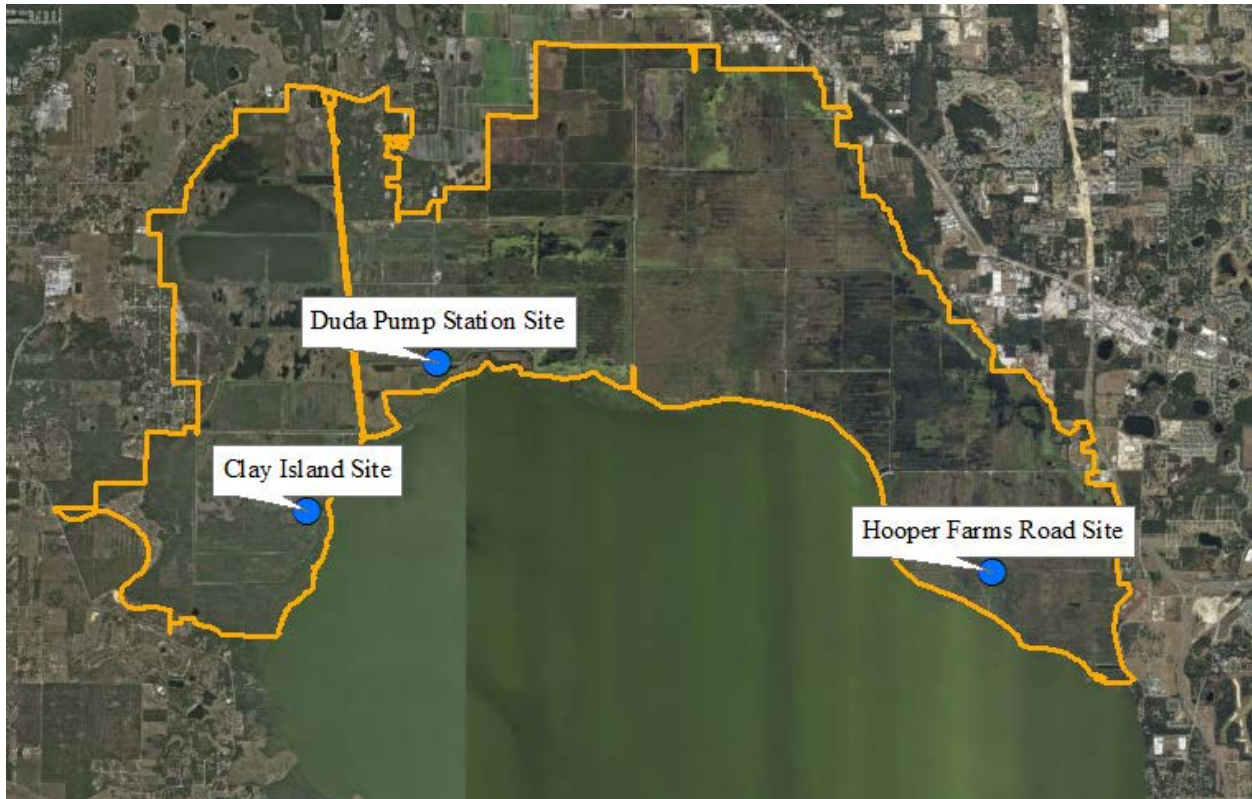


Figure 2: Potential Project Site Locations

Site Details:

- Clay Island Site:
  - Estimated site area: 1.5 ac
  - Distance to power: three-phase power 1.1 miles from the site
  - Distance to lake water: 0.25 miles
  - Access to the site location is through Ranch Road off CR 48 in Lake County. Contractor is responsible to repair any damage to existing roadways, fence, and other property disturbed by Contractor.
- Duda Pump Station Site:
  - Estimated site area: 0.1 ac
  - Distance to power: three-phase power adjacent to site
  - Distance to lake water: 0.5 miles
  - Access to the site location is through the North Shore Trailhead/McDonald Canal Boat Ramp entrance off CR 448A in Lake County. Contractor is responsible to repair any damage to existing roadways, fence, and other property disturbed by Contractor.
- Hooper Farms Road Site:
  - Estimated site area: 0.1 ac
  - Distance to power: power poles are adjacent to site with capability of installing service for three-phase power. Any required costs associated with establishing service to this site would be the responsibility of Contractor

- Distance to lake water: 0.5 miles
- Access to the site location is through Lust Road off CR 437/Binion Road in Orange County. Please note that the first mile of this roadway within District property is part of the Wildlife Drive, which is accessible to the public between sunrise and sunset on Friday, Saturday, and Sunday as well as on federal holidays. When the Wildlife Drive is open to the public, the traffic flow is one-way, east to west on Lust Road, and Contractor must go with the flow of traffic. No heavy equipment or hauling of materials are permitted on days when the Wildlife Drive is open to the public. Contractor is responsible to repair any damage to existing roadways, fence, and other property disturbed by Contractor.

**Piping and Pumping:**

All piping and pumping of the water for the treatment process shall be the responsibility of Contractor.

**By-Product Disposal:**

Contractor is responsible to dispose of the by-products of the TP removed from the water column. Disposal may be by export out of the Lake Apopka watershed or within the watershed if biologically immobilized by a process approved by the District, as verified by independent monitoring. Disposal costs must be considered when calculating the cost per pound of TP removed.

**Power:**

Contractor may have to provide a separate power feed and meter for the new treatment process. Securing power at the site and paying for the installation and services will be the responsibility of Contractor. Any transformers installed for this project must be underground.

**Adverse Conditions:**

Contractor is responsible to provide contingency plans for potential process interruptions (drought, power loss, flooding/inundation, etc.). The District cannot guarantee TP concentrations will be optimal for maximum treatment efficiency.

**Permits:**

Within 30 days of the Effective Date of the Agreement:

- Contractor is responsible to submit a summary of expected permits required based on process and site selected, including estimate of time required to obtain without support from the District.
- Contractor is responsible to provide a time line for completion of permitting and construction and expected time to first invoice for TP removal.
- Contractor shall enter into a separate “Special Use Agreement” with the District that allows Contractor to construct and operate the proposed facility on District property.

**Public Access and Use:**

The facility must be compatible with current public use and access to the area. No roads or levees may be blocked such that District vehicles do not retain access.

**Mobilization/Demobilization:**

Contractor shall be responsible for all the site preparation, construction, maintenance and security of the proposed process and shall include all costs (including, permitting, powering, mobilization, site preparation/construction, maintenance, ingress/egress, and demobilization) into the \$/pound bid price.

Upon expenditure of all funds or completion of the contract, whichever comes first, Contractor must remove all infrastructure related to the process immediately thereafter not to exceed 90 days. The site shall be returned to preexisting conditions by the removal of all structures, equipment pads, buried pipes, wires, conduit, and other utility lines used as part of the process. All areas in which Contractor worked must be uniformly graded. Contractor is responsible to restore ground cover by sodding or seeding with hydro-mulch. Any trees or shrubs removed will not need to be replaced.

Sodding or Seeding: Demobilization includes the restoration of disturbed areas. Contractor is responsible to establish ground cover through sodding or seeding.

- If sodded, Contractor is responsible to water the sod for the first two weeks after all sodding is completed. At the end of two weeks, any sod that has died must be replaced by Contractor within one week. Watering after this point will be the responsibility of the District
- If seeded, Contractor must cover seed with hydro-mulch as part of the planting process. Contractor is responsible to water and maintain the seeding until viable grass covers at least 90% of the seeded areas. At the end of 30 days, all bare areas must be re-grassed and hydro-mulched by Contractor within ten calendar days and maintained until the 90% groundcover requirement is met. Watering from that point forward will be the District's responsibility.

Any items related to the project may be left in place if Contractor and the District mutually agree. If any other permits or agreements require restoration in a manner different from that which is specified above, Contractor must confirm with the District to receive written authorization to deviate from these requirements.

#### **Reporting/Deliverables:**

TP removed must be assessed from ongoing mass balances of input and output water measured by sampling. These influent/effluent values will be verified by analysis of material/by-products exported or in some manner appropriate for the process selected. All capital, operational and self-monitoring costs shall be factored into the cost per pound, assuming a contract period of two years.

The District may hire an independent monitoring contractor to review, collect raw data, and process their own calculations to verify the reported results of Contractor. The independent monitoring contractor must be provided with access to the worksite for all monitoring purposes. If there is a discrepancy of more than 25% between Contractor's calculations and the independent monitoring contractor's findings, Contractor and District will meet to resolve the differences to determine the correct calculations for phosphorus removed.

#### **IV. TASKS AND DELIVERABLES**

The District recognizes the fact that TP systems are different and have different design, construction and operational requirements, and further that in a pay-for-performance context, the primary deliverable is TP removed from Lake Apopka's water column. Most tasks are, therefore, identified as potential documentation necessary for reimbursement of invoiced TP.

- Submit quarterly reports on the progress of the TP removal development
- Notify the District independent consultant of system harvest operations
- Provide adequate documentation via previously approved methodology of TP removed with every invoice
  - Average daily TP influent/effluent concentration
  - Flows of water in treatment process
  - TP effluent concentration targets
  - Verification of disposal of process materials, by-products and TP removed
  - Determination of TP removed

- Mass balance with pounds/TP removed
- Annual Reports
- Final Reports
- Removal of system if determined to be unsustainable or not cost-effective

## V. TIME FRAMES AND DELIVERABLES

Contractor shall invoice monthly. Each invoice shall be accompanied by monitoring data from both Contractor and the independent monitoring contractor and necessary calculations to support amount of TP being invoiced.

**Alternative schedules may be offered by Contractor subsequent to award. However, project closeout shall not extend beyond five years from the Effective Date of the Agreement.**

Quarterly update reports shall be submitted to the District outlining:

- **Activities on site**
- **Future planned changes (for approval)**
- **TP removed monthly**
- **Daily TP concentrations of the influent and effluent**
- **Cost summary**